

Serial No.: 10/822,847
Docket No.: 101-1033
Response to Final Office Action dated March 23, 2009
Reply to the Final Office Action of February 3, 2009

Listing of Claims:

1. (Previously Presented) A method of indicating functions of buttons in an image display apparatus, the method comprising:
generating an image indicating functions assigned to the buttons; and
displaying the image on the image display apparatus,
wherein the image is displayed at a position on the image display apparatus close to the buttons, and wherein the displaying of the image on the image display apparatus further comprises:
detecting a pivot angle of the image display apparatus, and
displaying the image rotated according to the pivot angle at a position close to the buttons.
2. (Original) The method of claim 1, wherein the image is text indicating the functions assigned to the buttons.
3. (Original) The method of claim 2, wherein the language of the text can be selected by a user.
4. (Original) The method of claim 2, wherein the image also includes symbols indicating at least one function assigned to at least one respective button.
- 5-6 (Canceled)
7. (Previously Presented) An image display apparatus comprising:
an image display unit;
a graphics processing unit which supplies images displayed by the image display unit;
a controller which sets display parameters of the image display apparatus, has buttons for item selection, and performs operations assigned to the buttons; and
a pivot detector which detects a pivot angle of the image display apparatus and supplies

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pivot angle data to the graphics processing unit,

wherein:

the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit,

the zones to display an image indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons, and

the graphics processing unit displays the image in the zones rotated according to the pivot angle at a position close to the buttons.

8. (Canceled)

9. (Original) The apparatus of claim 7, wherein the image indicating functions assigned the buttons is text indicating the functions assigned to the buttons.

10-18 (Cancelled)

19. (Previously Presented) An image display apparatus having buttons to select items of a display, comprising:

an image display unit including zones to display an image indicating functions assigned to the buttons;

a graphics processing unit to supply images displayed by the image display unit;

a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle detected to the graphics processing unit such that the graphics processing unit supplies an image to the image display unit at a same pivot angle as the image display unit; and

a controller to set display parameters of the image display apparatus, to perform operations assigned to the buttons, to generate image information to be displayed in the zones and to supply the image information to the graphics processing unit,

wherein the image display unit displays the image in the zones rotated according to the pivot angle at a position close to the buttons.

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20. (Original) The image display apparatus of claim 19, wherein the zones are in a close corresponding relationship with the respective button.

21. (Original) The image display apparatus of claim 19, wherein the functions can be displayed in several different languages.

22. (Previously Presented) The image display apparatus of claim 19, further comprising:
a button discrimination unit to discriminate which button is pushed.

23. (Original) The image display apparatus of claim 19, wherein the image is displayed when any one of the buttons is pushed.

24. (Original) The image display apparatus of claim 19, further comprising a second set of buttons, wherein when the image display unit is pivoted, the zones become in close corresponding relationship with the second set of buttons.

25-26 (Canceled)

27. (Previously Presented) A method of indicating functions of buttons in an image display apparatus having a screen and a frame with the buttons, the method comprising:
generating one of first functions of a first button and one of second functions of a second button to be displayed on the screen; and
generating sub-functions of at least one of the first and second buttons according to the generated first and second function,
wherein the generating of the one of the first functions comprises simultaneously generating each set of the first and second functions according to activation of one of the first and second buttons.

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28. (Original) The method of claim 27, wherein each of the first functions and the second functions comprises one or more characters, and the generating of the first functions comprises displaying the characters in a direction in which the first and second buttons are arranged on the frame.

29. (Original) The method of claim 27, wherein each of the first functions and the second functions comprises one or more characters, and the generating of the one of the first functions comprises displaying the characters in a direction having an angle with an arrangement of the first and second buttons.

30. (Cancelled)

31. (Original) The method of claim 27, wherein the generating of the one of the first functions comprises displaying the one of the first functions and the one of the second functions on corresponding zones of the screen.

32. (Original) The method of claim 27, further comprising:
changing one of the first functions to another function corresponding to the first button to be displayed on the screen.

33. (Original) The method of claim 27, wherein at least one of the first functions and the second functions is programmable.

34. (Original) The method of claim 27, wherein the first functions and the second functions comprises at least one of menu, select, +, -, symbols ↑ or ↓, a format of a signal source, and one of languages.

35. (Previously Presented) An image display apparatus having a screen and a frame with at least one button, comprising:
a graphics processing unit to process at least one function of the respective at least one

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button to be displayed on the screen at a position corresponding to the at least one button;

a pivot detector to detect a pivot angle of the image display apparatus and to provide the pivot angle detected to the graphics processing unit such that the graphics processing unit supplies an image to the image display unit at a same pivot angle as the image display apparatus; and

a controller to set display parameters of the image display apparatus, to perform the at least one function, to generate the at least one function to be displayed on the screen and to supply the at least one function to the graphics processing unit,

wherein the image display apparatus displays the image rotated according to the pivot angle at a position close to the at least one button.

36. (Original) The image display apparatus of claim 35, wherein the at least one function of the respective at least one button comprises first and second sub-functions, and the generating of the first and second sub-functions comprises selectively generating one of first and second sub-functions according to activation of the respective button.

37. (Previously Presented) A device for displaying an image, comprising:
a screen;

a housing having an opening and an outer border surface substantially surrounding the opening, wherein the screen is positioned inside the housing so as to be viewable through the opening;

at least one input unit being positioned on the housing, wherein the actuation of the at least one input unit allows controlling of a function of the display device; and

a detector unit to detect whether the device is in a portrait mode or in a landscape mode,

wherein at least one symbol is displayed which is respectively assigned to the at least one input unit, and wherein the orientation of the at least one symbol is changed in accordance with the result of the detector unit, and the at least one symbol, whose orientation is changed, is displayed at a position close to the at least one input unit.

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38. (Previously Presented) The device according to claim 37, wherein the detector unit detects the portrait mode or the landscape mode in response to a user rotating the screen.

39. (Previously Presented) The device according to claim 37, wherein the at least one symbol comprises at least one icon or text indicating a function of the display device.

40. (Previously Presented) The device according to claim 39, wherein the at least one symbol is configured to be displayed on the screen in a location that establishes a visually corresponding relationship between the at least one symbol and the at least one input unit.

41. (Previously Presented) The device according to claim 40, wherein the function includes a function to control display parameters of the display device.

42. (Previously Presented) The device according to claim 37, wherein the function includes a function to control display parameters of the display device.

43. (Previously Presented) The device according to claim 37, wherein the at least one input unit further comprises at least one of group comprising a set of horizontally arranged input keys and a set of vertically arranged input keys.

44. (Previously Presented) The device according to claim 37, wherein the at least one symbol is configured to be displayed horizontally and in an upright direction to indicate a respective position and function of the at least one input unit regardless of the portrait or the landscape mode of the display device.

45. (Previously Presented) The device according to claim 37, wherein the at least one symbol further comprises an OSD menu having selectable items to adjust the display parameters of the screen, and wherein the OSD menu is configured to be displayed distant from

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the at least one image.

46. (Previously Presented) The device according to claim 37, wherein the at least one input unit is a button.

47. (Previously Presented) The device according to claim 37, wherein the at least one input unit is positioned on the outer border surface which is substantially flush with the screen.

48. (Previously Presented) A method of controlling a display device having at least one of input unit positioned on a housing of the display device, the method comprising:
displaying at least one symbol on a screen, the symbol indicative of a function to control the display device, the at least one symbol being assigned to the at least one input unit;
detecting a rotated state of the display device;
changing an orientation of the at least one symbol according to the detection of the rotated state of the display device; and
controlling the function of the display device upon actuation of the at least one input unit, wherein changing an orientation of the at least one symbol further comprises:
displaying the at least one symbol, whose orientation is changed, at a position close to the at least one input unit.

49. (Previously Presented) The method as claimed in claim 48, wherein the symbol is a text.

50. (Previously Presented) The method as claimed in claim 48, wherein the symbol is an icon.

51. (Previously Presented) The method as claimed in claim 48, wherein the determining of the rotated state of the display device determines the rotated state of the display device in response to a user rotating the screen of the display device.

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52. (Previously Presented) The method as claimed in claim 51, wherein the rotated state is either a portrait or a landscape viewing state.

53. (Previously Presented) The method as claimed in claim 48, wherein the function includes at least one function to control a display parameter of the display device.

54. (Previously Presented) The method as claimed in claim 53, wherein the function includes one of contrast, brightness, and color control.

55. (Previously Presented) The method as claimed in claim 48, wherein the at least one symbol visually corresponds to at least one input unit.

56. (Previously Presented) The method as claimed in claim 48, wherein the at least one input unit is a button.

57. (Previously Presented) The method as claimed in claim 48, wherein the at least one input unit is positioned on the display device to be flush with the screen.

58. (Previously Presented) The method as claimed in claim 48, wherein the at least one input unit includes a plurality of input units.

59. (Previously Presented) The method as claimed in claim 58, wherein the at least one input units are buttons.

60. (Previously Presented) The method as claimed in claim 48, wherein the at least one input units includes a plurality of input units disposed in one of a vertical direction and a horizontal direction.

61. (Previously Presented) The method as claimed in claim 48, wherein the

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changing of the orientation of the at least one symbol comprises rotating the symbol substantially 90 degrees.

62. (Previously Presented) The method as claimed in claim 48, wherein the respective assignment of the displayed at least one symbol to the at least one input unit remains the same even though the at least one symbol is rotated.

63. (Previously Presented) A method of controlling a display device having at least one of input unit positioned on a housing of the display device, the method comprising:
displaying at least one symbol on a screen, the symbol indicative of a function to control the display device, the at least one symbol being assigned to the at least one input unit;
changing an orientation of the at least one symbol in accordance with a detection of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen;
and
controlling the function of the display device upon actuation of the at least one input unit, wherein changing an orientation of the at least one symbol further comprises:
displaying the at least one symbol, whose orientation is changed, at a position close to the at least one input unit.

64. (Previously Presented) A method of controlling a display device having at least one of input unit positioned on a housing of the display device, the method comprising:
displaying at least one symbol on a screen, the at least one symbol indicative of a function to control the display device, the at least one symbol being assigned to the at least one input unit;
changing an orientation of the at least one symbol in accordance with a detection of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen;
and
controlling the function of the display device upon actuation of the at least one input unit, wherein the at least one symbol visually corresponds to at least one input unit, the at least one input unit is disposed near the at least one symbol, and the at least one input unit is

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disposed so as to be substantially flush with the surface of the screen, and
wherein changing an orientation of the at least one symbol further comprises:
displaying the at least one symbol, whose orientation is changed, at a position
close to the at least one input unit.

65. (Previously Presented) The method of claim 1, wherein at least one of the image and an OSD menu having selectable items to adjust display parameters of the image display apparatus is displayed, when any one of the buttons is pushed.

66. (Previously Presented) The method of claim 1, wherein the buttons are disposed on a front frame of the display apparatus.

67. (Previously Presented) The method of claim 7, wherein at least one of the image and an OSD menu having selectable items to adjust the display parameters of the image display apparatus is displayed, when any one of the buttons is pushed.

68. (Previously Presented) The method of claim 7, wherein the buttons are disposed on a front frame of the display apparatus.

69. (Previously Presented) The method of claim 19, wherein at least one of the image and an OSD menu having selectable items to adjust the display parameters of the image display apparatus is displayed, when any one of the buttons is pushed.

70. (Previously Presented) The method of claim 19, wherein the buttons are disposed on a front frame of the display apparatus.

71. (Previously Presented) The method of claim 27, wherein the generating of the one of the first functions comprises displaying the one of the first functions and the one of the second functions on corresponding zones of the screen, when any one of the buttons is pushed.

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72. (Previously Presented) The method of claim 27, wherein the buttons are disposed on a front side of the frame.

73. (Previously Presented) The method of claim 35, wherein at least one of the image and an OSD menu having selectable items to adjust the display parameters of the screen is displayed, when at least one button is pushed.

74. (Previously Presented) The method of claim 35, wherein the at least one button is disposed on a front frame of the display apparatus.

75. (Previously Presented) The method of claim 37, wherein at least one of the at least one symbol and an OSD menu having selectable items to adjust display parameters of the screen is displayed when the at least one input unit is actuated

76. (Previously Presented) The method of claim 37, wherein the at least one input unit is disposed on a front frame of the display apparatus.

77. (Previously Presented) The method of claim 48, wherein at least one of the at least one symbol and an OSD menu having selectable items to adjust display parameters of the screen is displayed when the at least one input unit is actuated.

78. (Previously Presented) The method of claim 48, wherein the at least one input unit is disposed on a front frame of the display apparatus.

79. (Previously Presented) The method of claim 63, wherein at least one of the at least one symbol and an OSD menu having selectable items to adjust display parameters of the screen is displayed when the at least one input unit is actuated.

80. (Previously Presented) The method of claim 63, wherein the at least one

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input unit is disposed on a front frame of the display apparatus.

81. (Previously Presented) The method of claim 64, wherein at least one of the at least one symbol and an OSD menu having selectable items to adjust display parameters of the screen is displayed when the at least one input unit is actuated.

82. (Previously Presented) The method of claim 64, wherein the at least one input unit is disposed on a front frame of the display apparatus.